

CLAIMS

1. A method of manufacturing a glycoprotein having a human-type sugar chain, comprising a step in which a transformed plant cell is obtained by introducing to a plant cell the gene of glycosyltransferase and the gene of an exogenous glycoprotein, and a step in which the obtained transformed plant cell is cultivated.
2. A method according to claim 1, wherein the glycosyltransferase is an enzyme capable of conducting a transfer reaction of a galactose residue to a non-reducing terminal acetylglucosamine residue.
3. A method according to Claim 1, wherein the glycoprotein with a human-type sugar chain comprises a core sugar chain and an outer sugar chain, wherein the core sugar chain comprises a plurality of mannose and acetylglucosamine, and wherein the outer sugar chain contains a terminal sugar chain portion with a non-reducing terminal galactose.
4. A method according to Claim 3, wherein the outer sugar chain has a straight chain configuration.
5. A method according to Claim 3, wherein the outer sugar chain has a branched configuration.
6. A method according to Claim 5, wherein the branched sugar chain portion has a mono-, bi-, tri- or tetra configuration.
7. A method according to Claim 1 through Claim 6, wherein the glycoprotein contains neither fucose nor xylose.

8. A plant cell having a sugar chain adding mechanism which can conduct a transfer reaction of a galactose residue to a non-reducing terminal acetylglucosamine residue, wherein the sugar chain adding mechanism adds a sugar chain
5 containing a core sugar chain and an outer sugar chain, wherein the core sugar chain comprises a plurality of mannose and acetylglucosamine, and wherein the outer sugar chain contains a terminal sugar chain portion with a non-reducing terminal galactose.
- 10 9. A plant cell according to claim 8, wherein the plant cell is transformed with the gene of a first enzyme capable of conducting a transfer reaction of a galactose residue to a non-reducing terminal acetylglucosamine residue and the
15 gene of a second enzyme which can enhance the first enzyme.
10. A plant cell according to claim 9, wherein the second enzyme is selected from the group consisting of Mannosidase I, Mannosidase II, β 1,4-Galactosyltransferase (GalT) and
20 N-acetylglucosaminyltransferase I (GlcNAcI).
11. A plant regenerated from the plant cell of claim 8.
12. A recombinant plant, or portion thereof, that produces
25 mammalian-like glycoproteins comprising neither fucose or xylose.
13. A glycoprotein with a human-type sugar chain obtained using the method according to Claim 1 through Claim 7.
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14. A plant-produced glycoprotein comprising neither fucose or xylose.